



State of Utah

DEPARTMENT OF NATURAL RESOURCES
DIVISION OF OIL, GAS AND MINING

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May 24, 1994

Mr. Michael Lee Pagel
Chief Engineer
Barneys Canyon Mine
8200 South 9600 West
P.O. Box 311
Bingham Canyon, Utah 84006-0311

original hard copy in mail

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To	Mike Pagel	From	Wayne Hedberg
Co.	Kennecott	Co.	DOGM
Dep.	Barneys Cyn	Phone #	538-5340
Fax #	569-7190	Fax #	359-3940

Dear Mr. Pagel:

Re: Draft Revision Submission, Melco Expansion Project, Kennecott Corporation,
Barneys Canyon Mine, M/035/009, Salt Lake County, Utah

The Division has completed a review of your draft revision submission received March 3, 1994. After reviewing the information, the Division has the following comments which will need to be addressed before tentative approval may be granted. The comments are listed below under the applicable Minerals Rule heading. Please format your response in a similar fashion.

R647-4-105 Maps, Drawings & Photographs

105.2 Surface facilities map

Please indicate the location of the sulfide plant on the appropriate map. Please indicate the locations for any repositories to be constructed as part of the waste rock management plan on the appropriate map. (AAG)

105.3 Drawings or Cross Sections (slopes, roads, pads, etc.)

The Melco pit bottom elevation of 6460 feet AMSL does not agree with what is shown in figure 2.1-12. Please explain this discrepancy. (AAG)



track-hoe in small lifts (20-25 foot). Salvaged topsoil needs to be adequately protected (long-term stockpiles) or could be used directly for concurrent reclamation on areas no longer needed for operations. The amount of topsoil to be salvaged and the location and stabilization of topsoil piles needs to be identified. (LMK)

R647-4-109 Impact Assessment

109.1 Impacts to surface & groundwater systems

Section 4.1 (Surface Water) states the Melco north dumps will affect approximately 7000 feet of the intermittent and perennial Barney's Creek. How does Kennecott plan to mitigate these impacts? This section also indicates waste dumps will be constructed in accordance with DWQ approved water management plans. Please provide the Division with a copy, or a description of these water management plans. (TWJ)

Section 4.2 (Ground Water) indicates the Melco pit bottom will lie 60 feet above the water table but does not explain any expected impacts to the ground water system or any proposed prevention or mitigation measures. Please provide this information or reference where this information has been provided in the original plan. (TWJ)

R647-4-110 Reclamation Plan

110.3 Description of facilities to be left (post mining use)

The reclamation plan does not describe the disposition of the sulfide ore flotation plant at the time of final reclamation. This area may have been overlooked because the location of the plant is on a previously disturbed and permitted area. Was the sulfide plant intended to have a post-mine use? If so, please explain. If the plant is to be removed/demolished the reclamation estimate will need to include these costs. (AAG)

A question also remains regarding the ultimate disposition of the other fixed Barney's Canyon mining facilities/structures (eg., office buildings, warehouses and maintenance shops, etc.). It is not clear how (or if) these facilities were bonded for reclamation under the original plan approval. If this was an oversight, then this issue/concern must be corrected as part of the permit revision process. Please provide an itemized list and basic description of all

permanent structures that will need to be removed/decommissioned at the time of mine closure and reclamation. Please describe how these facilities will be reclaimed and also provide a cost estimate for reclamation. (AAG)

110.5 Revegetation planting program

It is recommended that yellow sweetclover (at 1 pound PLS/ac.) be added to the temporary stabilization mix and that small burnett (*Sanguisorba minor*) and forage kochia (*Kochia prostrata*) be added to Table 5.6-1 Seed Mix for Topsoiled Areas at a rate of 1 pound PLS (each) per acre. Also, for the upper areas (pit and dump areas), mountain big sagebrush (*Artemisia tridentata* vaseyana) (at the same rate) is more appropriate. (LMK)

R647-4-111 Reclamation Practices

111.11 Structures & equipment buried or removed

See previous comments regarding the reclamation of the sulfide plant and associated Barneys Canyon permanent surface facilities. (AAG)

R647-4-113 Surety

The reclamation plan and surety estimate do not contain a line item for the sulfide plant. Since the area for the sulfide plant was previously disturbed and permitted, the costs for reclaiming this facility are not specifically included by multiplying the average cost per acre by the amount of new area disturbed. Reclamation of the disturbed area where the plant will be located may have been previously included, but since the plant is a new facility that old estimate would not be accurate. Please explain/justify the exclusion of reclamation costs for the sulfide plant. If reclamation costs for this facility were previously included, please provide a reference to the appropriate document and/or page. (AAG)

This latest proposal will create approximately 353 acres of additional disturbance. Approximately 292 acres of that disturbance will be reclaimed. The difference between the figures leaves 61 acres of disturbed area which will not be reclaimed. Kennecott's adjustment in the reclamation surety used the average cost per acre based on the disturbed area which will be reclaimed. The value used was \$3,812/acre in 1993 dollars. The new total was escalated to 1999 dollars using a factor of 1.2108 to represent five years of escalation at

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an unknown annual factor. The reclamation estimate will need to be escalated five years into the future using the Division's current annual escalation factor of 2.10%. (AAG)

R647-4-116 Public Notice & Appeals

Because this application for a permit change has been categorized as a permit revision, a 30-day public notice will be published by the Division once a tentative approval decision is reached.

This summarizes our technical review comments on your application. Please contact me, or any of the technical staff, should you have questions or concerns in this regard.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Wayne Hedberg". The signature is fluid and cursive, with a large, stylized "H" and "B".

D. Wayne Hedberg
Permit Supervisor
Minerals Regulatory Program

jb
cc: Don Ostler, DWQ
Lowell Braxton, DOGM
Minerals staff (route)
M035009.rev